

1980

Group Influence and Cognitive Consistency as Determinants of Value Change: a Methodological Analysis of Self-Confrontation Theory.

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GROUP INFLUENCE AND COGNITIVE CONSISTENCY AS DETERMINANTS OF
VALUE CHANGE: A METHODOLOGICAL ANALYSIS OF SELF-CONFRONTATION
THEORY

The Louisiana State University and
Agricultural and Mechanical Col.

PH.D.

1980

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Group Influence and Cognitive Consistency
as Determinants of Value Change:
A Methodological Analysis of
Self-Confrontation Theory

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Psychology

by
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May 1980

Acknowledgements

The author wishes to express his thanks to the members of his dissertation committee: Professors Donald Hoffeld, Irving Lane, Felicia Pryor, Lawrence Siegel, and especially Perry H. Prestholdt, chairman and major professor.

Extra special thanks go to Drs. Prestholdt and Pryor, who across four years of study, seasoned constructive criticism with support and encouragement; the author would also like to thank extra-departmental sources of gratification and satisfaction (outside the realm of this dissertation), Drs. Gresdna Doty of the Department of Speech and Sandra Kungle of the School of Music. These are four people whose skill, energy and sincerity in what they do and teach make them excellent role models for students of this or any discipline.

And thanks, most of all, to my wife Charlotte, to whom this dissertation is lovingly dedicated.

Table of Contents

List of tables.....	iv
Abstract.....	v
Body of dissertation.....	1
Reference notes.....	74
References.....	75
Appendices.....	78
Vitae.....	89

List of Tables

Cell frequencies by sex and condition.....	51
Means and standard deviations of value rankings....	53
Analysis of variance: Equality.....	54
Analysis of variance: Freedom.....	60

Abstract

The present study attempted to either extend, modify or challenge Rokeach's (1973) Self-confrontation theory of value change. Rokeach (1973) found that subjects who were confronted with specific self-confrontation messages, which were designed to make differences between their value systems and self-concepts salient, were more likely than control subjects to change the rank-ordering of the values Freedom and Equality in a ranking task containing 18 values. Rokeach explained this phenomenon by invoking the concept of self-dissatisfaction, which he said subjects came to feel as a result of being exposed to the self-confrontation messages.

The present study compared this explanation with the Reference Group Influence theory of Kelman (1958) and others who felt that subjects would modify values merely by identifying with certain positively perceived reference groups.

In a simple single-factor design, four experimental conditions were compared with a control condition. The experimental conditions consisted of separate self-confrontation manipulations derived from Rokeach's original manipulation. These were:

(1) an Intrinsic Inconsistency condition which implied to subjects an inconsistency between their own value systems and self-concept, based on information not taken from an external source; (2) a Reference Group only condition, which

exposed subjects to value rankings of a potential reference group; (3) an Extrinsic Inconsistency condition, which implied an inconsistency between values and self-concept, based on the value rankings of the reference group; (4) a Replication condition, which was a virtual replication of Rokeach (1973); and (5) a Control condition. Behavioral measures which were thought to reflect value change were also taken.

Results indicated that the Intrinsic Inconsistency subjects were the only ones to elevate rankings of the value "Equality" significantly more than the controls. Although the Intrinsic Inconsistency condition's responses to behavioral measures were also greatest among the five conditions, this relationship was not significant. Thus only limited support was found for Rokeach's self-confrontation theory, and no evidence was found for a reference group influence effect. Possible explanations for these findings were offered as well as possibilities for future research.

Group Influence and Cognitive Consistency

as Determinants of Value Change:

A Methodological Analysis of

Self-Confrontation Theory

The study of attitudes and attitude change has been one of the major areas of investigation for many social psychologists for almost four decades. These researchers have busied themselves with attempts at theoretical formulations designed to establish relationships between attitudes and all aspects of behavior. Ultimately, the study of attitude change brought about various postulations concerning the mechanisms involved in maintaining and/or achieving cognitive consistency. Specifically, theories tried to explain people's attempts to reconcile perceived differences between two or more held attitudes. The theories generally held that these perceived differences or inconsistencies resulted in some specific affective or motivational state, such as cognitive dissonance. The person was then motivated to act in a way which would remove this "uncomfortable" state by reducing the inconsistency. This could be done by adopting some attitude or behavior which was consistent or congruent with other attitudes or behaviors.

Rokeach (1973) has classified various cognitive consistency theories in terms of the nature of various types of inconsistency. For example, Abelson and Rosenberg (1958) proposed a theory of cognitive-affective consistency which dealt with contradictions between the perceived usefulness of an attitude object to realize certain goals, and the favorable or unfavorable attitudes toward the object. Similarly, Osgood and Tannenbaum's (1955) Congruity theory posed the effects of contradictions between two attitude systems. Heider's (1958) and Newcomb's (1959) theories described contradictions between an attitude system and a cognition about a significant other's attitude, and McGuire (1960) dealt with contradictions between beliefs concerning one attitude object. Dissonance theorists (Festinger, 1957) discussed conflict between an attitude and a behavioral cognition. Finally, Hovland (1957) dealt with contradictions between one's own attitude and the perceived attitude of significant others.

Another issue precipitated by research in attitude change has been the validity of attitude change findings over the long term. It has even been suggested that researchers have tended to emphasize the search for variables affecting the change process itself, while not concerning themselves with factors underlying the persistence or non-persistence of these changes. Cook

and Flay (1978) point out that

Most researchers have focused on the determinants of immediate attitude change...

However, there has been no corresponding interest in studying the conditions under which attitude change persists over time. Indeed, there is no comprehensive review of the persistence literature other than short lists of relevant experiments up to 1969. (p. 2)

Similarly, Rokeach (1973) has stated that the changes in attitudes found in cognitive consistency studies are typically found to be short-lived. Even though achieving consistency implies restoration of a previously disrupted state of equilibrium,

cognitive theories in social psychology have not asked whether an attitude change merely restores the consistency held at an earlier level or represents a higher or lower, more or less integrated, or mature or self-actualized level of consistency. (p. 223)

So Rokeach is implying that attempting to change attitudes by making attitudinal discrepancies salient to subjects is useless since it only results in short-term change.

Rokeach, in his theory, has tried to circumvent

the problem of short-term attitude change by invoking the concept of value. Rokeach (1973) sees values as more central than attitudes. A value is seen as an

enduring prescriptive or proscriptive belief that a specific mode of behavior or end-state of existence is preferred to an opposite mode of behavior or end-state. This belief transcends attitudes toward objects and situations, ideology, presentations of self to others, evaluations, judgments, justifications, comparisons of self with others, and attempts to influence others. (p. 25)

Rokeach makes clear the major differences between an attitude and a value:

an attitude refers to an organization of several beliefs around a specific object or situation. A value, on the other hand, refers to a single belief of a very specific kind. It concerns a desirable mode of behavior or end-state that has a transcendental quality to it, guiding actions, attitudes, judgments and comparisons across specific objects and situations and beyond immediate goals to more ultimate goals. (p. 48)

In this sense, the differentiation between value

and attitude is clearly made by virtue of the emphasis being placed on the arbitrary evaluative nature of values. Whereas attitude is sometimes seen as the result of a sum total of qualitatively evaluated beliefs (Fishbein and Azjen, 1975), values are the sources of these evaluations, standards upon which each individual attitude toward objects or situations are based. A person has as many attitudes as he has interactions with objects or situations; he has only as many values as he has learned beliefs concerning desirable modes of behavior and end-states of existence.

Most importantly, values are seen to occupy a more central position than attitudes in one's own cognitive system, and thus are determinants of both attitudes and behavior. For Rokeach, the cognitive system maintains an inner "core". Functionally organized around this inner core is a hierarchy of cognitive concepts. The layer most central to the core consists of the terminal values which are the individual's beliefs concerning desirable end-states of existence. Next are the instrumental values which are beliefs concerning desirable modes of conduct which are "instrumental" in achieving the terminal values. The final layer is the individual's attitudes toward relevant objects. Thus, in the cognitive system it is values, and especially the terminal values, which are seen to be

most central to behavior; specifically, this is because they are used as standards of behavior.

Among the instrumental and terminal values, there is yet another theoretical differentiation: Morality values and Competence values. Morality values refer to those with an interpersonal focus which, when violated, result in feelings of guilt for wrongdoing. Competence values are more at an intrapersonal level; their violation leads to feelings of shame about personal inadequacy.

There is, however, something even more central which interacts with values to affect attitudes and behavior: the self-concept. Rokeach defines the self-concept as "an organization of all the distinctive cognitions, negative as well as positive, and the affective connotations of these cognitions that would be displayed if a full answer to the question 'Who am I?' were forthcoming" (p. 215). The functions served by values essentially converge into one major function: to help maintain and enhance one's self-concept. Specifically, values maintain and enhance an individual's concept of his own morality and competence.

We can now see the importance of Rokeach's theory within the framework of cognitive consistency. According to Rokeach, all of the various cognitive concepts

are interdependent. The more central the concept to the entire system, the more enduring and far-reaching should be its effects on other parts of the system.

For example, a change in an individual's self-concept (which, as Rokeach points out, is an aim of psychotherapy) leads to a change in functionally related terminal values, instrumental values and attitudes, and inevitably, in behavior. For example, someone whose self-concept were to change from one of dependence to one of autonomy might increase the importance of the terminal value "A Sense of Accomplishment" in his value system. This change should be reflected in behavior requiring greater ambition.

Likewise, a change in any one of the cognitive concepts other than self-concept would also lead to changes in the other concepts, but these changes would probably not be as enduring.

Rokeach feels that psychologists have assumed values to be far more resistant to change than attitudes. This is why the overwhelming preference in the literature has been for the study of attitudes over values. Unfortunately, changes in attitude appear to be short-lived because, according to Rokeach, the more central values underlying them have been left intact.

Consistency theorists have maintained that change

takes place when various attitudes or cognitions are seen to be inconsistent. This inconsistency results in a discomfort of some sort which the person is then motivated to relieve. Relief is achieved when an attitude or cognition changes so as to be congruent with remaining attitudes or cognitions. Rokeach maintains that even though the changed attitude may be more congruent with other attitudes, cognitions or behaviors, it may be even more inconsistent with the underlying values that have not changed. Rokeach theorizes that when attitude-attitude or attitude-cognition inconsistencies are resolved, it creates an even greater attitude-value or cognition-value inconsistency. The accompanying tension is therefore even greater than that experienced previously. The only way to relieve this tension is for the changed attitude to revert back to its original position after a short period of time. This, Rokeach says, is why most attitude change is not long-lasting. Changed attitudes are of necessity still in conflict with unchanged values.

To achieve permanent attitude change, Rokeach suggests that one must first change the underlying value. Values should be subject to change using cognitive contradictions in the same way that attitudes change by being in contradiction with one's self-concept.

Rokeach states that "A value should undergo enduring change if maintenance or enhancement of self-conception is at stake..." (p. 217). If a value is in conflict with one's self-concept, the value changes to become consonant with the self-concept, and this value change affects attitudes as well as behavior.

The hypothetical motivational construct which Rokeach employs in his consistency theory is that of self-dissatisfaction. Any perceived discrepancy between self-conceptions and values, attitudes or behavior is experienced as a state of self-dissatisfaction. Thus Rokeach is postulating that the motivator for change is the affective experience of self-dissatisfaction, caused by the perception of inconsistency among values, attitudes or behaviors. Whenever any of these cognitive entities conflict with each other, the one that is at odds with the self-concept is the one that will change. Thus, if a value and an attitude conflict, the value will change if it is not consonant with the self-concept. Similarly, if the attitude is not consonant with the self-concept, it is the attitude that will change in order to become more consistent with the self-concept and the value.

Rokeach (1973) outlines four major differences

between his and other consistency theories:

1) In Rokeach's theory, cognitive inconsistency is seen as a discrepancy between some cognitive element and one's self-concept. While other theorists have utilized the self-concept to some extent in their theories (Aronson, 1969; Secord and Backman, 1965), the range of possible discrepancies between the self-concept and other cognitive entities has been extended by Rokeach.

2) Rokeach's theory stresses values as a more central construct than attitudes for cognitive consistency. "A clear distinction between the value and attitude concepts is as indispensable for the behavioral sciences as the distinction between genes and chromosomes is for biology and genetics" (p. 231).

3) Attitude theories tend to predict what are ultimately short-term changes. Rokeach's theory is attempting to address itself to long-term change.

4) Implicit in the theory is that behavior change should follow value change. Whereas hard evidence concerning behavior change as a result of attitude change is relatively rare (Wicker, 1969), the present theory predicts that behavior change should result from changes in the value system.

In his major work in the area, Rokeach (1973) confronted subjects with inconsistencies between their held values and their self-concept. The techniques used

to raise individuals' awareness of these inconsistencies are referred to as "self-confrontation procedures" and are assumed to result in a heightened state of self-dissatisfaction. In an effort to relieve themselves of this negative affective state, Rokeach reasoned, subjects would then modify their value systems in such a way as to make them more congruent with their self-concept. That is, certain values in their value "hierarchy" would become more important in order to establish continuity with their self-concept.

In utilizing the self-confrontation procedure, Rokeach exposed students to information which was designed to evoke self-dissatisfaction in individuals who had ranked the value Equality low in value rankings of importance. Equality was selected as a target value because previous research had indicated a discrepancy between individuals' rankings of Equality and the related value Freedom.

In previous research at the National Opinion Research Center (NORC), median rankings for Equality, Freedom and the other terminal and instrumental values had been established for a nationwide sample of subjects. The median ranking of Equality for the college student sample was 8.50, while the median ranking for Freedom was 5.38.

Rokeach believed that most subjects in his study, who had ranked Equality low relative to the value Freedom could be confronted with certain statements implying inconsistencies between their self-concept and their value system. He assumed that most people, especially college students, conformed to an American societal norm of having an egalitarian self-concept. Therefore, he suggested to subjects that their low ranking of Equality relative to Freedom is basically inconsistent with their egalitarian self-concept. He reinforced this inconsistency by interpreting the discrepancy in ranking to mean that they valued freedom for themselves as more important than freedom for others. The self-dissatisfaction resulting from this perceived inconsistency was expected to lead to an increased regard for the value Equality, which was in turn expected to lead to changes in behaviors reflecting this value.

Subjects were first administered the Terminal Value section of the Rokeach Value Survey, Form E. The Survey is a list of 18 terminal values shown in alphabetical order. The 18 values were derived from a much larger list, obtained from sources like Rokeach himself, 30 graduate students, and 100 adults from metropolitan Lansing, Michigan. Values were eliminated by correlating value rankings and removing the

higher correlated values from the pool. Others were eliminated if they did not signify end-states of existence or were just too specific. The Survey has gone through five physical revisions, at one point going from 12 to 18 values. Test-retest reliabilities for college-age subjects range from about .75-.80, depending on the form used.

In the Rokeach experimental situation, the subject is simply asked to "arrange them (the values) in order of their importance to YOU, as guiding principles in YOUR life." Each value is accompanied parenthetically by a short definition of the value. The 18 terminal values are as follows:

1. A Comfortable Life (a prosperous life)
2. An Exciting Life (a stimulating, active life)
3. A Sense of Accomplishment (lasting contribution)
4. A World at Peace (free of war and conflict)
5. A World of Beauty (beauty of nature & the arts)
6. Equality (brotherhood, equal opportunity for all)
7. Family Security (taking care of loved ones)
8. Freedom (independence, free choice)
9. Happiness (contentedness)
10. Inner Harmony (freedom from inner conflict)
11. Mature Love (sexual and spiritual intimacy)
12. National Security (protection from attack)
13. Pleasure (an enjoyable, leisurely life)

14. Salvation (saved, eternal life)
15. Self-Respect (self-esteem)
16. Social Recognition (respect, admiration)
17. True Friendship (close companionship)
18. Wisdom (a mature understanding of life)

After rank ordering the terminal values, the subjects were shown the median rank ordering of the values by 298 Michigan State University students. The fact that the value Freedom had been ranked first by the sample, and that the value Equality had been ranked eleventh was pointed out to the students. It was then suggested that seeing Freedom as relatively important and Equality as relatively unimportant might be interpreted as meaning that someone like that sees his own freedom as very important but sees others' freedom as not nearly as important. It was in this way that the perceived inconsistency between the subjects' egalitarian self-concept and their low value ranking of Equality relative to Freedom was to result in self-dissatisfaction.

After spending a few minutes comparing their rankings with those of the sample of students, subjects were asked if they were or were not in sympathy with the aims of civil rights demonstrators. This led to yet another attempt to manipulate self-dissatisfaction. Subjects were then shown a table illustrating the median student rankings of the values Freedom and Equality

as a function of whether or not the sample students sympathized with the aims of civil rights demonstrators. Based on the data in that table, certain inferences were made salient to the subjects:

Students who are strongly for civil rights value Equality rather highly--they ranked it five; but those against civil rights place a much lower value on Equality--they ranked it 17 in importance...This raises the question whether those who are against civil rights are really saying that they care a great deal about their own freedom but are indifferent to other people's freedom. Those who are for civil rights are perhaps really saying they not only want freedom for themselves but for other people too (p. 238).

Subjects then rated the strength of their agreement with this interpretation of the data, as well as their satisfaction or dissatisfaction with their own value rankings.

Three weeks later, subjects reranked the values. Control groups had ranked the values initially but had not been exposed to any of the feedback of others' values or the inconsistency manipulations.

Again, three to five months after the pretest and experimental treatment, all subjects reranked the value

list. At about the same time, they also received by mail "letters of solicitation", ostensibly from the NAACP requesting membership and a one dollar membership fee. This solicitation was made again approximately one year following the initial one. The responses to the solicitations were used as behavioral measures of the importance of Equality in one's value system.

Rokeach found significant increases in the value hierarchy for the values Equality and Freedom in three separate studies, the latter two utilizing a third posttest 15-17 months after the experimental treatment. In all three studies, median rankings of these values by subjects in self-confrontation conditions increased significantly from pretest rankings as well as being significantly different from the controls. Equality rankings typically increased twice as much as did Freedom rankings. In addition, value change remained through both three-week and three-month intervals. Significant changes in control groups, where found, were in the opposite direction. Also, significantly more solicitations were answered with contributions in self-confrontation groups than control groups, although this effect was much stronger in the first posttest than in the second or third. Expressed self-dissatisfaction

with the way pretest values had been ranked was also significantly greater in self-confrontation subjects than in controls.

Close examination of the self-confrontation procedure raises questions regarding the precise cause of value changes in Rokeach's study. Rokeach's basic premise is that the self-confrontation technique raises the subject's awareness of inconsistencies between cognitions concerning his values and his self-concept. The awareness of these inconsistent cognitions results in self-dissatisfaction, which in turn motivates value change in an effort to remove the disparity between held values and self-concept. In the procedure section of his study, Rokeach states that he attempted to arouse this state of self-dissatisfaction in the subjects three separate times.

The first attempt to manipulate self-dissatisfaction made salient a possible contradiction between self-concept and terminal values. Rokeach reasoned that subjects who see themselves as equally in favor of freedom for all people should logically rank the values Freedom and Equality as approximately equal in importance in their value systems. If the subjects rank Freedom much higher in importance than Equality, then this implies that subjects are much more concerned with their own freedom

than with anyone else's.

Rokeach confronted his subjects with this logical inconsistency by showing them the value rankings obtained from 298 college students. The median ranking for Freedom had been 1, that for Equality had been 11. Rokeach then suggested to his subjects that because these students ranked Freedom much higher than Equality, they were more interested in their own freedom than other people's freedom. Since the subjects had previously ranked their values in a similar manner, this served to suggest an inconsistency in the subject's mind. That is, he has an egalitarian self-concept, yet Equality is not nearly as important a value as is Freedom. Theoretically, subjects will relieve the resulting self-dissatisfaction by changing the importance of this value in their value system to make it consistent with their egalitarian self-concept. Thus, their ranking of Equality should increase in importance.

Addressing possible alternative explanations for this change, Rokeach raised the possibility of conformity pressure, but argued that conformity would result in the maintenance of the original value rankings. That is, conformity pressure should result in no change or a decrease in the importance of Equality since the rankings of values by the 298 sample students essentially

agreed with the pretest rankings of the subjects. However, a self-confrontation procedure should result in Equality becoming more important. Thus, Rokeach was attempting to establish value change in a direction away from the position apparently advocated by the sample of MSU students.

Nevertheless, rather than relying on a single manipulation of self-confrontation, Rokeach added a second self-dissatisfaction manipulation. This manipulation may have, in fact, resulted in group pressure to change values in the same direction predicted by Rokeach. This attempt at arousing self-dissatisfaction was implemented by implying a contradiction between the subject's self-concept and his values and attitudes. First, the subject committed himself to a position on civil rights and demonstrations. Then the subjects were shown data depicting value rankings of previous subjects as a function of their position on civil rights and demonstrations. The written description of this data indicated that individuals who were positive toward civil rights ranked both Equality and Freedom relatively high and close together, while those who felt negatively toward civil rights and demonstrations ranked Equality much lower than Freedom.

Even though Rokeach maintains that self-dissatis-

faction should result from this information, no inconsistency seems to have been made salient at this point. Instead, what seems to be happening is that information is being provided regarding a reference group. The 298 students who originally ranked the values are categorized as members of the "strong civil rights group", the "middle group", or the "anti-civil rights group". In the description of this data, it is pointed out to the subjects that the students who were labeled as "strongly for civil rights" rank Equality higher than the other two groups and closer to Freedom than the other two groups. In fact, this pro-civil rights group ranked Equality higher than Freedom. Thus, subjects were provided information about a reference group and how that group ranked Freedom and Equality. As a result, it is very possible that subjects felt pressure to align their values with a positively perceived reference group (Kelman, 1958), i.e., those strongly for civil rights. Therefore, if subjects are changing their values as a result of this manipulation, it is not clear whether change is due to the arousal of self-dissatisfaction stemming from the awareness of an inconsistency between value system and self-concept, or to subjects' attempts to realign their values with and

conform to the values of members of a positively perceived reference group (or attempts to avoid conforming to a negatively perceived reference group).

In the same study, Rokeach made yet another self-confrontation attempt. In the first manipulation he had implied that subjects who differentiated in importance between the values Freedom and Equality in their value systems were actually being inconsistent with their egalitarian self-concept. In the second manipulation, he displayed data that merely showed that the people who do make this differentiation are those who are not sympathetic toward civil rights. In this third manipulation attempt, Rokeach tried to elicit self-dissatisfaction by establishing a logical inference based on these first two premises. If people who rank Equality much lower than Freedom are being inconsistent, and if data indicate that people who do not strongly favor civil rights make this differentiation, then the logical inference is that people who do not strongly favor civil rights have value systems inconsistent with their self-concept. That is, those who do not strongly favor civil rights see their own freedom as more important than other people's freedom. Conversely, this conclusion implies that people who strongly favor civil rights are consistent and value freedom for all people as much as they value their own. He accomplishes all this by sug-

gesting to subjects that

those who are against civil rights are really saying that they care a great deal about their own freedom but are indifferent to other people's freedom. Those who are for civil rights are perhaps really saying they not only want freedom for themselves but for other people too (p. 426).

According to Rokeach, those who see themselves as truly egalitarian should realize this inconsistency in themselves, become dissatisfied with themselves, and change their value systems to make Equality closer in importance to Freedom.

Unfortunately, this third manipulation attempt at evoking inconsistency is impossible to utilize without first exposing subjects to the data from the reference group. Therefore, it seems impossible to tell whether the resultant value change is derived from inconsistencies brought to awareness during self-confrontation or simply from the subjects' desire to align their values with those "most strongly for civil rights".

It might be useful to distinguish between the two types of inconsistencies being utilized here. The first manipulation involved an inconsistency derived solely from the subject's own value system and self-concept,

and that was intrinsic in origin. The last manipulation required information about the values of an external source or group to establish inconsistency. Thus, it is possible that such "intrinsic" inconsistencies (as in the first manipulation) and "extrinsic" inconsistencies (as in the third) would have differential effects on value change. That is, only one of these methods of effecting value change may have actually been responsible for the changes in Rokeach's study. But, because the effect of each method is never measured separately, the type of inconsistency which accounts for this value change cannot be specified.

Rokeach maintained that all of the attempts to arouse self-dissatisfaction did so in the same way, and by inference, are additive. Since Rokeach never specifies how much self-dissatisfaction is necessary to evoke value change, then apparently any of the above three situations should be sufficient to do so. On the other hand, it is possible that the entire effect observed by Rokeach is not due to self-dissatisfaction at all, but simply a result of information about the values of a reference group contained in the second self-dissatisfaction arousal attempt. It seemed necessary, therefore, to test the individual effects of the specific arousal attempts independently in order to determine which of

these explanations accounts for his results.

Other studies involving the Rokeach paradigm have mostly been done by students and associates of Rokeach, and have similarly failed to tease out possible confoundings with group influence. The studies were originally conceived in order to specify other modifiable values and behaviors.

Rokeach and Cochrane (1972), in a preliminary study, found that in conditions both of privacy, in which the subject was not closely observed, and non-privacy, in which he was carefully observed, significant increases in the value rankings of both Freedom and Equality were found from eight to nine weeks after the self-confrontation procedure. It had been theorized that value change would be minimized in a non-private situation, one which would encourage defensiveness in the subject. This was not found to be the case. Subjects can indeed undergo value change in non-private situations.

In an attempt to find out whether awareness of one's own value hierarchy is a precondition for the Rokeach effect, Rokeach and McLellan (1972) replicated the original Rokeach study but subjects did not complete the pre-manipulation Value Survey. They reasoned that self-feedback of one's values in the form of a pre-test

might not be necessary since, through the process of social comparison, subjects always have access to and make use of cognitions concerning their current value system. Significant increases in the rankings of both Freedom and Equality for the experimental group were found four weeks after the self-confrontation session. Similar results were found in a condition that replicated the previously discussed (Rokeach, 1973) research. Rokeach and McLellan (1972) concluded that a pretest is not necessary to make subjects' values salient in the self-confrontation procedure.

Rokeach (1975) eliminated human experimenters completely when he replicated his original findings by using a computer terminal instead of an experimenter to supply feedback. Subjects presented with this feedback showed value change two months after the treatment. The control group showed no such effect. Again, however, subjects were receiving reference group information, and may have changed their values on the basis of this group influence.

It is important to note that in the three above-mentioned studies, group influence is still a viable alternative explanation for the results. The studies were basically methodologically similar to the original study.

Possible confounding with reference group influence seems especially clear in a related study by Hollen (1972). Hollen raised the target value "A World of Beauty" in college students merely by pointing out to them that "young people and better-educated people tend to rank 'A World of Beauty' higher than the general public ranks it." Presumably, Rokeach's explanation of this finding was that subjects see their low ranking of "A World of Beauty" as incompatible with their self-concept of being young and well-educated, and somehow different from the general population. Reference group influence may actually be the main factor responsible for the effect, since students may not wish to see themselves as deviating from the values of their reference group.

To see if value modification would affect smoking behavior, Conroy, Katkin and Barnette (1973) increased self-control in smokers by suggesting that "people who have trouble quitting cigarettes are trying to be broad-minded about a task that requires rigid self-discipline" to subjects who had ranked the value "Broadminded" third and "Self-disciplined" eighth. Over a set of four blocks of four days each, smokers not only raised their rankings of the value "Self-disciplined", but

maintained a low cigarette consumption of about two cigarettes per four day block. This was in comparison with a control group whose consumption averaged about eight times that amount. For Rokeach, this is strong evidence that value change facilitates change of attitudes toward specific behaviors (e.g., quitting smoking). However, again, these results may be due to subjects feeling the effects of group influence. Subjects see themselves as members of the "trying to quit smoking" reference group, and thus do whatever they are told group members do, i.e., be self-disciplined. It may very well be that the subjects' desire to act with the desired group rather than self-dissatisfaction with their value systems that was truly responsible for these effects.

Finally, Greenstein (1976) attempted to extend the research into a field setting using unobtrusive measures. Similar to Rokeach (1973), he gave to student teachers two sets of data. In one, he depicted the median rankings of the values "Mature Love" and "A Sense of Accomplishment" for a sample of Central Michigan University student teachers. Overall, this student sample had ranked "A Sense of Accomplishment" much higher than "Mature Love". However, the other table displayed the

data as a function of their classification as either having high or mediocre potential as teachers. "Good" teachers ranked "Mature Love" higher than "A Sense of Accomplishment". "Mediocre" teachers reversed the rankings, putting "A Sense of Accomplishment" ahead of "Mature Love". Greenstein suggested to the subjects that this data indicated that "good" teachers see mature love as more important than a sense of professional accomplishment. Control subjects saw tables depicting median rankings of professors of education, and received no information about the value systems of good or bad teachers.

Thirteen weeks after the treatment, all of the values were ranked by all subjects. The results showed that experimental subjects ranked "Mature Love" significantly higher than controls. In addition, these subjects scored higher than controls on a measure of teacher ability scored by double blind judges. These judges rated the student teachers' abilities on a set of seven dimensions including communication skills and overall teaching potential. Greenstein suggested that by making the value "Mature Love" more important, the subjects became more personally concerned with the problems of others and less concerned with personal achievement. This

value change altered the students' attitudes about teaching and working with children, which was reflected in their behavioral scores.

On the other hand, the influence of the reference group could also explain these results. The characteristics of "good" and "mediocre" teachers were clearly specified. So, whether subjects were able to perceive the "hypocrisy" of rating "A Sense of Accomplishment" above "Mature Love", or whether they were merely influenced by the group with which they wished to identify ("good teachers") is unclear.

One purpose of this study, then was to attempt to determine whether value change is a result of the awareness of inconsistencies between values and/or attitudes and self-concept, or of information about the value system of a reference group with which the subject identifies. According to Rokeach, awareness of an inconsistency between values and self-concept is enough to arouse self-dissatisfaction and to effect value change. However, if merely exposing subjects to the value rankings of a positively perceived reference group is sufficient to effect change, then much of Rokeach's work would be more parsimoniously explained in terms of social influence theory (Kelman, 1958). In terms of this theory, the subject comes to identify with the reference group

because he "wants to establish or maintain a satisfying self-defining relationship to another person or group" (p. 53). One way they maintain or establish this relationship is by accepting attitudes, opinions, norms and values of this reference group. The specific value hierarchy to which they conform is irrelevant, so long as they appear to the person to uphold his position as a member of the group. If subjects' values change, then, it may be because they wish to conform to the values of the reference group of which they perceive themselves to be a part.

Of course, once the confounding effect of the reference group was eliminated as an alternative explanation, there was still the possibility that specific types of inconsistencies, whether intrinsic or extrinsic could be specified. Perhaps the inconsistency must be linked up with information concerning a reference group for change to be realized. However, Rokeach implies that the mere presentation of an intrinsic inconsistency, with no mention of a reference group, should be sufficient to evoke value change. If only an intrinsic inconsistency is needed, then providing information concerning a reference group might be pointless or could even serve to interfere with the value change process.

The second purpose of this study, then, was to attempt to specify the differential effects of intrinsic and extrinsic inconsistencies with regard to value change.

In addition, the role of value change in behavior change was reexamined. Since Rokeach also states that long-term behavioral change can only come about through value change, the study of Rokeach's separate self-confrontation manipulations was used to determine their effects on long-term behavior change.

To determine the factors necessary to produce value change and behavioral change, this study was composed of five conditions: 1) an Intrinsic Inconsistency (II) condition, comprising Rokeach's first attempt to arouse self-dissatisfaction by pointing out a simple inconsistency between values and self-concept; 2) a Reference Group only (RG) condition, exposing subjects only to data which identify value rankings of positively perceived and negatively perceived reference groups; 3) an Extrinsic Inconsistency (EI) condition, in which subjects were provided with information on the value rankings of a reference group and an inconsistency confrontation based on the reference group's values; 4) a Replication (R) condition, which exposed subjects to all three of Rokeach's original arousal manipulations, and 5) a Control (C) condition which did not involve self-

confrontation or reference group information of any kind. Value change was measured by subjects' rankings on the Rokeach Value Survey. Since Rokeach states that value change also results in long-term behavior change, a measure of behavioral intention was made by telephone two weeks after the value ranking procedure, as well as a behavioral measure of value change.

It was, of course, expected that condition R, the Replication condition, would result in significant value change, since all three manipulations expected to produce change were present. This was also intended to confirm the effects of Rokeach's overall procedure on value change. The patterns of results for other conditions were to be used to either support Rokeach's theory, modify it, or support reference group influence as an alternative explanation:

- 1) Self-confrontation theory would predict that the two inconsistency conditions, II and EI, would result in greater value change than in the Control condition. So both II and EI should each produce self-dissatisfaction because these conditions contain self-confrontation procedures which make subjects aware of inconsistency between self-concept and values and/or attitudes. Thus it was reasoned that value change in conditions II and EI would confirm the predictions of self-confrontation

theory.

2) If the conditions involving self-confrontation, i.e., R, II and EI, showed greater value change than conditions RG and C, then Rokeach's explanation of the data would be supported. The former three conditions all contain inconsistency manipulations, designed to evoke self-dissatisfaction with subjects' value systems, while conditions RG and C do not. Thus, if only those conditions which included inconsistency manipulations were successful in bringing about value change, self-confrontation would apparently be a necessary condition for change. The reference group explanation would then be a less viable alternative explanation.

3) If conditions containing reference group data, R, RG and EI showed greater value change than conditions that did not, II and C, then this would be evidence that reference group influence is a viable explanation for the value change found by Rokeach (1973). In this case, subjects could be said to have responded to the social influence pressure of a positively perceived reference group. The group influence explanation would be seen to be more parsimonious because if group RG, which contained subjects being exposed only to reference group data, showed value change equivalent to the R or EI conditions, then the need for an inconsistency manipulation would have been obviated.

4) Comparison of the two inconsistency conditions, II and EI, would provide a test of the relative strengths of intrinsic and extrinsic inconsistencies. If extrinsic inconsistencies have stronger effects than intrinsic inconsistencies, then more needs to be done to understand the interrelationship, if any, between group influence and inconsistency effects. That is, what does group influence do to assure value change through confrontation of inconsistency? If intrinsic inconsistencies have stronger effects than do extrinsic inconsistencies, then Rokeach's model of value modification can be operationally simplified and be better understood in terms of self-dissatisfaction with one's value system per se. That is, if self-dissatisfaction can be caused by self-confrontation not involving group influence, then that one manipulation, based on inconsistency between one's own values and self-concept, is the major force involved in change.

5) Finally, the question of whether the changing of values is responsible for long-term behavioral change was evaluated. Behavior change was hypothesized to be either a by-product of the value change effected by reference group influence, or a natural extension of value change, which had resulted from awareness of inconsistency and self-dissatisfaction.

In summary, existing attempts to demonstrate the validity of Rokeach's theory have failed to eliminate the possible confounding effect of reference group influence. Are subjects really seeing themselves as hypocritical, and experiencing inconsistencies, or do they just want to be like "everybody else"? The major question in this study, then, was whether or not reference group theory can explain Rokeach's results. In addition, this study attempted to isolate the specific manipulations combined by Rokeach in trying to arouse self-dissatisfaction, and to assess their impact independently on value and behavior change.

Method

Subjects

Subjects were 207 undergraduates from lower-level psychology and education classes. All subjects were run in the classroom situation.

Materials

Materials consisted of the Rokeach Value Survey, Form E. Form E of the Survey is simply an alphabetical listing of the 18 terminal values derived by Rokeach. Subjects are usually required to enter numbers to the left of the values to reflect the rank-ordering they wish represented. Form E has demonstrated a test-retest reliability of .74, which has remained stable over varying time periods as well as over populations (Rokeach, 1973).

Procedure

There were three phases to the study, each separated by two-week periods. Subjects were told at the beginning of the Phase I session, and reminded at its conclusion, that they had to be present at both of the sessions in order to get credit for participation. Phase I of the study involved the manipulation itself, Phase II was the posttest, and Phase III consisted of the behavioral measures.

Phase I. Subjects were assigned to one of five conditions by the random distribution of "Survey packets". Each subject packet was marked in order to identify the experimental condition. The subjects were told that the study had to do with human values, and they were asked to follow the instructions in the packet very carefully. Subjects were assured that all information they provided as well as all survey data would be kept in confidence. There were five conditions:

1. In the Replication (R) condition, subjects were essentially presented with the three manipulations used in Rokeach's original study (Rokeach, 1973). The issue of equal rights for women was substituted for the civil rights issue in order to make the manipulation more relevant to subjects in 1979.

Subjects were first exposed to a fictional presentation of a median rank ordering of values by "recent LSU graduates". An interpretation of this data was suggested, with the implication of an intrinsic inconsistency. Subjects were then asked to assess this interpretation. The instructions read as follows:

Value Survey

This is a scientific study of value systems. There are no right or wrong answers in this study. The best answer is your own personal opinion.

We would first like to tell you some things we have already found out about the value systems of LSU students. I am sure that many of you would like to know what they are. Below is a list of 18 values in alphabetical order.

We were interested in finding out the relative importance of these values to the LSU student population. This scale was administered to 298 undergraduate students here recently. These students were asked to place a 1 next to the value which they thought most important to them, a 2 next to the value which they thought second most important, etc. The value which they thought least important was ranked 18th.

The numbers you see next to the values are the average ranking received by each value from all the students. Please examine the list carefully.

- 13 A Comfortable Life (a prosperous life)
- 12 An Exciting Life (a stimulating, active life)
- 6 A Sense of Accomplishment (lasting contribution)
- 10 A World at Peace (free of war and conflict)
- 17 A World of Beauty (beauty of nature and the arts)

- 11 Equality (brotherhood, equal opportunity for all)
- 9 Family Security (taking care of loved ones)
- 1 Freedom (independence, free choice)
- 2 Happiness (contentedness)
- 8 Inner Harmony (freedom from inner conflict)
- 5 Mature Love (sexual and spiritual intimacy)
- 16 National Security (protection from attack)
- 18 Pleasure (an enjoyable, leisurely life)
- 14 Salvation (saved, eternal life)
- 15 Social Recognition (respect, admiration)
- 4 Self-Respect (self-esteem)
- 7 True Friendship (close companionship)
- 3 Wisdom (mature understanding of life)

One of the most interesting findings here is that the students, on the average, felt that Freedom was very important--they ranked it 1; but they felt that Equality was considerably less important--they ranked it 11. Apparently, LSU students value freedom far more highly than they value equality. This suggests that LSU students in general are much more interested in their own freedom than they are in freedom for other people.

Think about this for a few moments. How strongly do you agree with this interpretation?

Notice in the table that:

1. Pro- and anti- ERA students all value freedom relatively highly. Of 18 values all groups rank Freedom among the top six.

2. Students who are strongly for ERA value Equality rather highly--they ranked it 5. But those against ERA place a much lower value on Equality--they ranked it 17. Those who are sympathetic but non-participants ranked Equality 11.

Apparently, both freedom and equality are important to some people, while to others freedom is very important but equality is not. This raises the question whether those who are against ERA are really saying that they care a great deal about their own freedom but are indifferent to other people's freedom. Those who are for ERA are perhaps really saying they not only want freedom for themselves but for other people too. What do you think?

1	2	3	4	5	6	7	8	9	10	11
I strongly					(check one)		I strongly			
agree with this interpretation.							disagree.			

This is the end of this phase of our experiment. We remind you that in order for your participation to be valid in this study, you must be here for the second phase which will be in two weeks. We thank you and hope this has been an interesting and instructive experience for you.

Subjects' agreement with the experimental manipulation messages was measured to assure that subjects did not undergo value change merely because they agreed with the persuasive message, but because they had experienced cognitive inconsistency.

Exposure of subjects to the table of 18 values with the sample median rankings, as well as the accompanying message amounted to the intrinsic inconsistency manipulation. Exposure to the ranking-ERA data with accompanying analysis and interpretation made up the extrinsic inconsistency manipulation. Here, it was suggested that those with attitudes against ERA held inconsistent values, while those subjects who were pro-ERA held values which are consistent.

2. In the Intrinsic Inconsistency (II) condition, subjects were exposed to the first of Rokeach's three manipulations. That is, they saw the list of median rankings of the 298 LSU students for all 18 values and read the interpretation suggesting that these students are more interested in freedom for themselves than they are for other people. Then, they indicated to what extent they agreed or disagreed with this interpretation. They also indicated their attitudes regarding ERA. They did not see any data depicting these students' value rankings categorized by positions on the ERA

question. Nor were they exposed to the manipulation of extrinsic inconsistency. (see Appendix A).

3. In the Reference Group only (RG) condition, subjects received the same initial instructions as the two groups above, except that the median rankings of the LSU student sample was not given. Instead, subjects were informed that the values had been ranked previously by a group of LSU students, and then the list of values and definitions was presented without the median rankings. They then made an attitudinal commitment on the ERA question. Following this, subjects were shown the table of median rankings for the student sample, tabulated for each of the three positions: I support ERA and have worked for its passage, I support ERA but have not worked for it, or I do not support ERA. This table indicated that students who support and worked for ERA ranked Equality 5, those who supported it but did not work for it ranked Equality 11, and those against ERA ranked it 17. In addition, it was specifically pointed out that subjects who support ERA rank Equality high, while those opposed to ERA rank Equality relatively low. Conceptually, subjects were being informed of typical value rankings for various reference groups, including a group they perceived positively and one they perceived negatively. There was no manipulation of inconsistency (see Appendix B).

4. The Extrinsic Inconsistency (EI) condition subjects were exposed to the identical initial instructions as the RG condition, including the value list without rankings. They made an attitudinal commitment on ERA, and then saw not only the table of median rankings of the values as a function of the sample students' positions on ERA, but also, unlike the RG condition, a self-confrontative interpretation of this data. It suggested that those who are against ERA are really saying that they care a great deal about their own freedom but are indifferent to the freedom of other people, and that those who are for ERA are saying they not only want freedom for themselves, but for other people too. Subjects then stated their agreement with the interpretation on an 11-point scale (see Appendix C).

5. Control subjects got the same introductory information as the two groups above, and made an attitudinal commitment on ERA. No data were shown them, nor were any implications made. At that point, control subjects rank ordered the values on the Value Survey. These data served as the basis of comparison with the posttest scores of the experimental groups.

Phase II. All subjects completed the Rokeach Value Survey, Form E (see Appendix D). Afterwards, all

subjects were told:

This is the end of the study. The purpose and results of the study will be explained to you in class, after all the results have been analyzed, probably in a few weeks.

Thank you for your participation.

Phase III. In an effort to assess the behavioral impact of the treatments, an attempt was made to contact all subjects who had responded favorably on the ERA question by telephone two weeks after the posttest. A female experimental confederate made the following solicitation:

Hello, is this ____? This is ____.

I am working for the League of Women Voters of Baton Rouge. We're trying to find out by telephone survey how the citizens feel about the Equal Rights Amendment. Could you tell me whether or not you support the Amendment? (If for it) We have prepared some letters on behalf of the ERA which we'd like to send to state legislators. All you have to do is to sign the letter and send it in to us.

Would you be willing to do that?

Thank you. Goodbye.

Subjects who responded with either an intent to sign the letter or an "undecided" were sent the following letter on plain stationery, along with a stamped envelope addressed to the local office of the League of Women Voters, and labeled "ERA Project":

November 25, 1979

Dear Louisiana Legislator,

I would like to urge you to support the Equal Rights Amendment passage in the Louisiana Legislature. A "yes" vote for ERA would insure a majority of our population equal participation in American society. Women, like their male counterparts, should be judged by the law as individuals, not as a class of inferior beings. It is important to note that the only kind of sex discrimination which ERA would forbid is that which exists in law. Interpersonal relationships and customs of chivalry will remain as they always have been, a matter of choice. Indeed, it would give new dignity to these important roles by confirming equality of rights regardless of sex, and upholding an individual's right to choose his/her place in society.

As a legislator (sic), I encourage your vigorous and effective support of the Equal Rights Amendment in words and in action.

Sincerely yours,

The subjects were also sent the following cover letter on League stationery, which was signed by the local chapter president:

November 12, 1979

Dear Friend,

Thank you so much for taking the time to speak to our representative the other evening.

Enclosed you will find a letter,, copies of which we are sending out to other ERA supporters like yourself throughout the state.

We would like you to please sign the letter and send it back to us in the accompanying stamped, self-addressed envelope. There are certain time constraints on us, so please try to send the letter back to us no later than Monday, November 19. All letters received will be forwarded together to various leaders in the Louisiana House and Sénate, as well as to other legislators. Thank you so much for

your support. Working together we can win!

Sincerely,

Marilyn P. Barfield

President

The two measures employed to evaluate the effect of value change on behavior were:

1. the differential rate of the response of intent to sign the letter over the five conditions, and
2. the actual differential rate of return of signed letters to the League office.

Results

A total of 207 students in three classes completed both Phases I and II of the study. Of these, a total of 115 subjects (56%), when asked if they supported the ERA, responded, "Yes, but I have not worked for the Amendment." One student responded that she both supported and had worked for the Amendment, and 91 students (44%) reported that they did not support the Amendment. Since only those who supported the ERA but had not worked for it were deemed acceptable as subjects to test the present hypotheses, the data obtained from the students in the latter two categories were not included in the analysis. In addition, to counteract any potential biasing effect of the comparatively large female/male ratio in the Control condition, six females were randomly drawn from the Control condition and excluded from the analysis. Attempts were made to recontact only the remaining 109 subjects for Phase III. Of these 109 subjects employed in the analysis, 60 (56%) were females while 49 (44%) were males. The cell frequencies according to sex are recorded in Table 1.

To confirm the relative stability of rankings over time, a t-test was performed to determine whether or not there was a significant difference between pretest and

Table 1
Cell Frequencies by Sex and Condition

<u>Condition</u>	<u>Females</u>	<u>Males</u>
EI	12	8
II	10	10
R	14	11
RG	11	12
C	13	8
	60	49

posttest rankings for the Control group. Mean Equality scores for pretest ($\bar{x} = 11.81$) were not significantly different from posttest rankings ($\bar{x} = 10.90$), $t(20) = 0.97$, $p = .34$. Similarly, mean Freedom scores for pretest ($\bar{x} = 5.95$) did not differ significantly from posttest scores ($\bar{x} = 6.19$), $t(20) = -.30$, $p = .77$. Thus rankings of Equality and Freedom appear to be stable over time when no intervention occurs. For the remainder of the analysis, pretest scores for the Control condition were utilized since they, as in other conditions, were subjects' first exposure to the ranking task.

Means and standard deviations were calculated for subjects' post-manipulation rankings of the values Equality and Freedom (see Table 2).

Analyses of variance were performed on the value data. The analysis was designed to answer certain research questions by comparing means of value ranking scores.

Rather than testing an overall main effect with a one-way analysis of variance, a series of four a priori contrasts were performed on the ranking data. The results of these contrasts are found in Table 3.

First, if Rokeach's theory were correct, it was expected that mean rankings in the Replication (R) condition would be significantly higher than in the

Table 2
Means and Standard Deviations of
Value Rankings

<u>Condition</u>		<u>Mean</u>	<u>S.D.</u>	<u>n</u>
Replication				
	Equality	10.56	3.94	25
	Freedom	5.84	4.34	25
Intrinsic Inconsistency				
	Equality	8.40	5.14	20
	Freedom	5.75	4.83	20
Reference Group only				
	Equality	10.78	4.87	23
	Freedom	5.96	5.47	23
Extrinsic Inconsistency				
	Equality	11.10	5.42	20
	Freedom	7.05	4.27	20
Control				
	Equality	11.90	4.13	21
	Freedom	5.95	3.94	21

Table 3
 Analysis of Variance:
 Equality

<u>Source</u> (Contrast)	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
RG + Control vs. others	1	45.71	2.07	.15
II + Control vs. others	1	11.16	0.51	.48
EI vs. II	1	72.90	3.30	.07
R vs. Control	1	20.64	0.93	.34
Error	104	22.08		

Control (C) condition. The Control group had been exposed to no self-confrontation manipulation, while the R condition subjects had apparently been exposed to three self-confrontation manipulations. When this hypothesis was tested by a contrast between the R and C conditions, no differences were found, $F(1, 104) = 0.93$, $p = .34$. However, it will be noted from Table 2 that the means ($\bar{x}_R = 10.56$, $\bar{x}_C = 11.90$) were in the expected direction; the mean rank for the R condition was higher than the mean rank for the C condition.

Secondly, based on Rokeach's theory, it was predicted that those conditions containing self-confrontations would have significantly higher value rankings than those that did not. That is, the combined mean ranking of conditions II, EI and R should be significantly higher than the mean ranking of conditions RG and C. This contrast provides a direct test of the overall difference between conditions containing self-confrontation manipulations and those that do not. Although the means were again in the expected direction ($\bar{x}_{II+EI+R} = 10.06$, $\bar{x}_{RG+C} = 11.31$), the contrast was not significant, $F(1, 104) = 2.07$, $p = .15$. Thus the results predicted by Self-confrontation theory were not supported.

The alternative explanation for the results of

Rokeach's research was based on the influence of reference groups. If this explanation were valid, subjects would not so much have experienced self-dissatisfaction from self-confrontation, but rather, identified with a positively perceived reference group, about which information was given in conditions R, RG and EI. Thus, it was predicted that conditions containing information from potential reference groups, i.e., R, RG and EI, to have mean rankings that were significantly higher than those that did not, i.e., conditions II and C. Again, no significant effect was found for this contrast, $F(1, 104) = 0.51$, $p = .48$. In fact, the means were nearly identical; the combined means for reference group conditions was 10.79, while that for non-reference group conditions was 10.19. Thus, no evidence was found for the influence of reference groups in the Rokeach paradigm.

It was postulated that intrinsic and extrinsic inconsistencies might differ in their impact upon value change. When II was compared to EI, the difference approached significance, $F(1, 104) = 3.30$, $p = .07$; the Intrinsic Inconsistency condition had the greater impact on the ranking of the value Equality. As can be seen in Table 2, the mean of the II condition ($\bar{x} = 8.4$) represents the highest ranking, and the mean of the EI condition ($\bar{x} = 11.1$) represents the next to

lowest ranking of Equality (the lowest being that of the Control condition).

Based on these findings, three additional post-hoc comparisons were made, utilizing Dunn's Bonferroni t (Dunn, 1961). First, the II condition was compared to the Control condition in an effort to ascertain the impact, if any, of the intrinsic inconsistency manipulation on value change. It was found that the II condition ($\bar{x} = 8.4$) had a significantly higher mean ranking than the Control condition ($\bar{x} = 11.9$), $F_{\text{Dunn}}(1, 104) = 6.03$, $p < .05$. Secondly, in order to determine the possible effect of the extrinsic inconsistency manipulation, the EI condition ($\bar{x} = 11.1$) was compared with the Control condition, but no significant difference was found, $F_{\text{Dunn}}(1, 104) = .32$, $p = \text{n.s.}$ Thus it was concluded that the intrinsic inconsistency manipulation had effected value change, while the extrinsic inconsistency manipulation had not.

An additional comparison was performed to determine if the Reference Group only condition had undergone value change. Again, no significant difference was found, $F_{\text{Dunn}}(1, 104) = 0.62$, $p = \text{n.s.}$

To summarize the results of the analysis of the value Equality, the order of mean rankings in decreasing order were:

Intrinsic Inconsistency (II), Replication (R), Reference Group only (RG), Extrinsic Inconsistency (EI) and finally, the Control condition. The ranking of Equality was found to be significantly higher in the II condition than in the Control condition. No other conditions differed significantly from the Control condition, but the difference between the II and EI conditions did approach significance.

Since, as previously reported, it was necessary to exclude six females at random from the Control condition, a statistical analysis was done in order to insure that results were not due to the unequal distributions of males and females across conditions. That is, it was necessary to confirm that the difference between the II and Control conditions was not due to the disproportionately greater number of females than males in the Control condition. The analysis was accomplished by performing a test of simple effects. In a pair of contrasts the II condition was compared to the Control condition for female subjects, and then again for male subjects. It was reasoned that if the II condition differed from the C condition only for females and not for males, then there would be reason to believe that the differential frequency of males and females in the II and C conditions might be confounding the effect of the manipulation. Ironically, when the contrasts were performed,

it was found that it was the males in the II condition, rather than the females, that showed significantly higher rankings than those in the Control condition. For males, the mean ranking for Equality in the II condition ($\bar{x} = 7.9$) was significantly higher than that of the controls ($\bar{x} = 13.0$). Thus clearly, the disproportionate number of females in the Control condition in no way contributed to the significant difference between the II and C conditions in the value ranking of Equality.

The experimental manipulations were not expected to affect the value Freedom, as Freedom was seen as the more stable value. To confirm this, an analysis identical to that performed on the Equality data was performed on the Freedom data (see Table 4). As can be seen from the table, none of the contrasts either achieved or approached significance. Post-hoc comparisons analogous to those in the Equality analysis were performed, and again no significant results were found. II compared to the Control condition yielded no significant difference, $F_{\text{Dunn}}(1, 104) = 0.02$, $p > .10$. Similarly, the comparison of EI vs. C as well as that of RG vs. C were both not significant. Apparently, there was no impact of self-confrontation or reference group influence on ranking of the value Freedom.

Table 4
Analysis of Variance:
Freedom

<u>Source</u> (Contrast)	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
RG + Control vs. others	1	1.75	0.08	.77
II + Control vs. others	1	4.73	0.22	.64
EI vs. II	1	16.90	0.79	.37
R vs. Control	1	0.14	0.01	.93
Error	104	21.27		

Additionally, for the EI and II conditions, Pearson Product-Moment correlations were calculated to determine the relationships between the value rankings and measures of subject agreement with the arguments contained in the confrontation manipulations. In Rokeach's (1973) study this analysis had been conducted in order to insure that value change occurred because subjects experienced self-dissatisfaction, and not because they agreed with the persuasive message. He found that overall, experimental subjects changed value rankings regardless of whether or not they agreed with the message, i.e., no correlation between value rankings and agreement was found.

In this study subjects indicated the magnitude of their agreement with the data interpretation supplied in the material. The Likert-type scale ranged from "I strongly agree with this interpretation" (1) to "I strongly disagree with this interpretation" (11). Analysis revealed that in the EI condition subject agreement with the interpretation correlated significantly with value rankings of Equality, $r(19) = .56$, $p = .01$. Conversely, in the II condition, subject agreement with the message interpretation did not correlate with value rankings of Equality, $r(19) = -.12$, $p = \text{n.s.}$ For the value Freedom, neither rankings of EI or II conditions correlated significantly with subject agreement, r 's (19) = .15 and .01, respectively.

Finally, there was an attempt to determine the relationship between subjects' rankings of Equality and relevant behavioral measures. Rokeach (1973) had originally predicted that any change in values effected by self-confrontation manipulations would itself effect a change in behavior relevant to that value. It was also expected that any change resulting from reference group pressure would also result in behavior change, since subjects' behavior would tend to be consistent with newly changed values.

The behavioral measures included a statement of intent to sign a pro-ERA letter, and the actual return of that letter by mail to League of Women Voters headquarters. Only 76 of 109 subjects were successfully contacted by phone by the experimenter's assistant. Of these, 59 said they would sign the letter (positive intent), 12 said they would not (negative intent), and five were undecided and wanted to see the letter before committing themselves. 14 of 15 subjects from the II condition made known positive intentions, 13 of 17 did so from the RG condition, 12 of 14 from the R condition, 11 of 14 from the Control condition and 9 of 16 from the EI condition.

Unfortunately, expected frequencies in 67% of the cells were below five, and thus a 3 X 5 Chi-square test of independence was decided against. Subsequently,

a chi-square test corrected for continuity was performed on a contingency table containing frequencies of "Yes" responses compared with "No" and "Undecided" responses. Since, apparently, only the II condition resulted in value change, the test compared the II condition with all other conditions. No significant effect was found, $\chi^2 = 0.15$, $p = \text{n.s.}$ A Fisher Exact test was then done to compare the frequencies of the II and Control conditions. Again, no significant relationship was found.

The purpose of measuring the return rate of the letters was to further gauge the extent of commitment to the ERA as a function of value change. Of 64 letters sent to those subjects who had stated their intent to sign the letters, 23 were returned to the League office signed, and 41 were never returned. No letters were returned by subjects who had been "Undecided's" with respect to intent to sign. Seven of 14 subjects in the II condition returned signed letters, five of 13 in the RG condition, four of nine in the EI condition, four of 11 in the Control condition and three of 12 in the Replication condition. Since most of the expected values for the cell frequencies were below five, no analysis could be performed on this measure. Nevertheless, it is noteworthy that the II condition had both highest proportion of intent as well as highest proportion of returns of all five conditions.

Discussion

This study attempted to evaluate the self-confrontation hypothesis described by Rokeach (1973) in the light of an alternative interpretation of value change based on reference group influence as suggested by the work of Kelman (1958) and others. Certain alternatives were put forth and examined.

Rokeach (1973) found that subjects' value rankings for the value Equality increased significantly when subjects were exposed to a self-confrontation manipulation. Virtually this same manipulation, with the exception of the issue employed (ERA as opposed to civil rights) was used in an attempt to replicate Rokeach's findings. It was predicted that if Rokeach's theory were valid, then the Replication (R) condition would have a significantly higher mean ranking for Equality than would the Control (C) condition. This was not found to be the case, as no significant difference was found. Thus the present study was not successful in replicating Rokeach's (1973) findings.

In seeking to discuss the implications of this inability to replicate Rokeach's result, it may be useful to consider possible "dynamics" of the effects of Rokeach-type manipulations on subjects. For example, rather than adding to the impact of a previous inconsis-

tency manipulation, an extrinsic inconsistency manipulation might actually detract from the overall effect. The present data would seem to support this contention. Even though the presence of an intrinsic inconsistency successfully elicited value change in the II condition, this same manipulation had a negligible effect in the Replication condition. Apparently, the extrinsic inconsistency manipulation in the R condition served to somehow neutralize or counteract the impact of the intrinsic inconsistency.

A possible explanation for the absence of value change in the Replication condition would be simply an excess of information. Subjects being presented with both data tables (which Rokeach himself admits are hardly very stimulating to college students) and both confrontation manipulations may have been less able to comprehend the logical connections between the self-dissatisfaction arguments and their implications for the value rankings of Freedom and Equality.

Another reason why the EI component of the Replication manipulation may have hindered value change is that the issue of ERA may not be as conceptually close to the value Equality as was the issue of civil rights for Rokeach's subjects. That is, civil rights may be a more defensible issue for subjects, and they would be

more likely to develop self-dissatisfaction over their perceived inconsistency with this issue, then with ERA.

It is noteworthy that Rokeach's study was done at a time and location which may have been conducive to the kind of value modification which Rokeach was attempting. At a more liberal institution such as Michigan State, in the time of the late 60's, the extrinsic inconsistency involving ERA might well have had a significantly greater impact than it did on this relatively conservative campus. That is, the ERA argument might be more likely to create self-dissatisfaction at a more liberal institution.

Reference group influence was postulated as a possible alternative explanation for the results of Rokeach's test of his theory. According to Kelman (1958) and others, subjects may be said to respond to the social influence pressure of a positively perceived reference group. If subjects exposed only to reference group data and not to a self-confrontation manipulation showed value change equivalent to the R or EI conditions, then the need for an inconsistency manipulation and resultant self-dissatisfaction would be obviated. It was thus predicted that if the reference group theory were valid, then the combined mean of conditions R, RG and EI (the three conditions containing reference group material)

would show a significantly higher ranking than would the mean of conditions II and Control (which do not contain any reference group material). This, too was not found to be the case as the contrast was not significant. When the RG condition was independently compared with the Control condition, it also was not found to differ significantly, although the rankings were in the predicted direction. It appears that this study provides little evidence for a Reference Group interpretation of the Rokeach paradigm. That is, there are no indications from the present data that reference group influence alone results in value change.

The qualitative differences between intrinsic and extrinsic inconsistencies suggested that they might have differential impacts on value change. Extrinsic inconsistencies emphasize the role of group influence in the modification of subjects' values. Intrinsic inconsistencies appear free of sources of group influence. In fact, the II condition is seen as the purest and most direct self-confrontation manipulation presented in Rokeach's original persuasive communication material; operationally, it is closest to Rokeach's theoretical concepts. Comparing the effects of these manipulations could therefore be seen as another indirect comparison of the Self-confrontation and Reference Group explanations of the original Rokeach findings.

Explicit in Rokeach's theory is the notion that any self-confrontation procedure which makes subjects aware of inconsistencies between self-concept and values should result in self-dissatisfaction and thus value change. Both the Extrinsic and Intrinsic Inconsistency conditions contained self-confrontation manipulations utilized by Rokeach, and thus were both theoretically capable of eliciting value change. It was therefore predicted that both the EI and II conditions would show higher value rankings than the Control condition, if Rokeach's theory were correct. The II condition was indeed significantly higher, while the EI condition was not. The difference between the II and EI conditions approached significance. The comparison of the EI condition with the II condition indicated that the II condition contained the highest of the five mean rankings, while the EI condition had the lowest ranking of the four experimental conditions; the only condition with a lower ranking was the Control condition. The results suggest that the II manipulation had a positive impact on value change while the EI manipulation had little or no effects.

The results strongly suggest that contrary to Rokeach's implication that self-confrontation manipulations are additive, this does not appear to be so.

Following his first self-confrontation manipulation (our II), Rokeach felt it necessary to "arouse an additional state of dissatisfaction" (Rokeach, 1973, p. 237), by adding what amounted to our EI manipulation. Yet the only condition that was found to effect value change was the one with only a single self-dissatisfaction-arousing message. The II condition's single manipulation was more effective than was the R condition's two.

Apparently, not all "self-confrontation" manipulations effectively make differences between the value system and self-concept salient enough to have an impact on value change. In this case, an extrinsic inconsistency, which utilized information about the values of an external source in order to point out the inconsistency, was not successful in eliciting value change. On the other hand, an intrinsic inconsistency, which was derived from subjects' own value systems and self-concepts, successfully effected an increase in the importance of the value Equality. Thus it would seem that Rokeach's theory could be modified to emphasize the impact of intrinsic inconsistencies which are devoid of the apparently ineffectual use of information concerning the values of external sources.

Curiously, the data indicated a significant positive correlation, for EI subjects, between value rankings of Equality and subjects' agreement with the EI message. This agreement measure was used as a device by Rokeach to insure that subjects were actually feeling self-dissatisfaction, as opposed to becoming convinced by the veracity of the message. Here, apparently, the few subjects in this condition who changed did so as a result of the persuasive influence of the message, which is what Rokeach assumed would not happen. Rokeach (1973) has pointed out that "Significant changes in values and attitudes were found about as often and to about the same extent among experimental subjects, regardless of variations in their...agreement with the experimenter's interpretation..." (p. 300).

For II subjects, a non-significant negative correlation was found between value rankings of Equality and subjects' agreement with the II manipulation. It may be inferred from this that the higher mean ranking in this condition was not a result of subjects' being convinced of the veracity of the II argument. In fact, there was no relationship between agreement and value change. Therefore, indications are that only the II condition subjects underwent self-dissatisfaction and this self-dissatisfaction was responsible for the value change. Subjects in the EI condition, who did not un-

dergo self-dissatisfaction, may have been in agreement with the persuasive message, but this apparently did not have the long-term impact necessary to affect value change.

Finally, an attempt was made to assess the impact of value change on subsequent behavioral change. It was hypothesized that those conditions in which value change was evident would show a significantly greater number of subjects willing to act on their egalitarian values. That is, subjects in these conditions would be more willing to sign a letter endorsing ERA. Since this measure only involved intent and not public behavior, an attempt was made to determine if intent to sign would result in the actual signing and returning of the letter. Thus, it was hypothesized that these conditions would have a significantly greater number of signed, returned letters than conditions not showing value change.

Although the II condition, the only one to have demonstrated significant value change, had the greatest proportion of stated intentions as well as actual letters returned, there were no significant differences among the conditions. Apparently, the value change manipulation was either too weak to have a meaningful impact on behavior, or else it was not durable enough

to maintain itself during the extended pre-measure period. It is also possible that the letter-signing task was not representative of behaviors dictated by an egalitarian self-concept. At any rate, it may be concluded here that there is little apparent behavior change effected by the modification of subjects' values by self-confrontation procedures.

It is unclear as to why the value change effect that was found did not extend to the behavioral measures. It was originally believed that despite traditionally low return rates of mailed survey material, subjects ranking Equality high relative to controls would be more likely to both express a willingness to sign pro-ERA material and to act upon that commitment. Perhaps, subjects do not extend their concept of equality to the Equal Rights Amendment. In any case, if it is assumed that value change has indeed taken place here, then it must be considered that behaviors may be inconsistent with values, much as they are often inconsistent with attitudes. Theoretically, some sort of "balance" concept might apply which could explain such "value-discrepant" behavior.

The present study has attempted to either extend or modify Rokeach's self-confrontation theory of value change. The data suggest that while there seems to be

little evidence for a reference group influence explanation of Rokeach-type effects, there does seem to be some evidence for the self-dissatisfaction construct which Rokeach employs to explain his theory. However, the outcomes of such value change attempts seem to hinge on the type of message employed. Intrinsic inconsistencies, which are those derived solely from the subject's own value system and self-concept, seem to have greater impact on value change than do extrinsic inconsistencies, which take into account information based on an external source in its inconsistency. While it has been suggested that intrinsic inconsistencies result in greater self-dissatisfaction than do extrinsic inconsistencies, the reasons for this and the variables affecting each type of inconsistency may generate future research.

In addition, value change that does take place seems to have little impact on behavior change. It is possible that such behavior changes based on alterations of value systems may be largely dependent on such variables as the subject's perceived relevance of the issue to the value, and the extent to which subjects are themselves ego-involved with the issue. Future research might examine this paradigm by manipulating different issues and subjects' potential involvement with them.

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Appendix A

Instructions for Intrinsic Inconsistency Condition

This is a scientific study of value systems. There are no right or wrong answers in this study. The best answer is your own personal opinion.

We would first like to tell you some things we have already found out about the value systems of LSU students. I am sure that many of you would like to know what they are. Below is a list of 18 values in alphabetical order.

We were interested in finding out the relative importance of these values to the LSU student population. This scale was administered to 298 undergraduate students here recently. These students were asked to place a one next to the value which they thought most important to them, a two next to the value which they thought second most important, etc. The value which they thought least important was ranked 18th.

The numbers you see next to the values are the average ranking received by each value from all the students. Please examine the list carefully.

(Value list with ranks)

One of the most interesting findings here is that the students, on the average, felt that Freedom was very important--they ranked it one; but they felt that Equal-

ity was considerably less important--they ranked it 11. Apparently, LSU students value freedom far more highly than they value equality. This suggests that LSU students in general are much more interested in their own freedom than they are in freedom for other people.

Think about this for a few moments. How strongly do you agree with this interpretation?

1 2 3 4 5 6 7 8 9 10 11

(check one)

Strongly agree

strongly disagree

Would you please answer honestly the following question in a related area:

Are you sympathetic with the aims of supporters of the Equal Rights Amendment?

_____ Yes, and I have personally worked for the Amendment.

_____ Yes, but I have not personally worked for the Amendment.

_____ No.

This is the end of this phase of our experiment. We remind you that in order for your participation to be valid in this study, you must be here for the second phase which will be in two weeks. We thank you and hope this has been an interesting and instructive experience for you.

Appendix B

Instructions for Reference Group only Condition

This is a scientific study of value systems.
There are no right or wrong answers in this study.
The best answer is your own personal opinion.

We would first like to tell you some things we have already found out about the value systems of LSU students. I am sure that many of you would like to know what they are. Below is a list of 18 values in alphabetical order.

We were interested in finding out the relative importance of these values to the LSU student population. This scale was administered to 298 undergraduate students here recently. These students were asked to place a one next to the value which they thought most important to them, a two next to the value which they thought second most important, etc. The value which they thought least important was ranked 18th. Please examine the list carefully.

(Value list without ranks)

Now, would you please answer honestly the following question in a related area:

Are you sympathetic with the aims of supporters of the Equal Rights Amendment?

- _____ Yes, and I have personally worked for the Amendment.
- _____ Yes, but I have not personally worked for the
Amendment.
- _____ No.

The 298 students in the study described above were asked this same question. The students' results were divided into 3 groups, according to how they responded. The table below shows the average ranking of the values Freedom and Equality for each of these three groups:

AVERAGE RANKINGS OF FREEDOM & EQUALITY

BY LSU STUDENTS

Yes, & have worked for the Amendment		Yes, but have not worked for the Amendment	No
Freedom	6	1	2
Equality	5	11	17

Notice in the table that:

- 1) Pro- and anti- ERA students all value freedom relatively highly. Of 18 values all groups rank Freedom among the top six.
- 2) Students who are strongly for ERA value Equality rather highly--they ranked it five. But those against ERA place a much lower value on Equality--they ranked it 17. Those who are non-participants but sympathetic ranked Equality 11.

Think about these results for a few moments.

This is the end of this phase of our experiment. We remind you that in order for your participation to be valid in this study, you must be here for the second phase which will be in two weeks. We thank you and hope this has been an interesting and instructive experience for you.

Appendix C

Instructions for Extrinsic Inconsistency Condition

This is a scientific study of value systems. There are no right or wrong answers in this study. The best answer is your own personal opinion.

We would first like to tell you some things we have already found out about the value systems of LSU students. I am sure that many of you would like to know what they are. Below is a list of 18 values in alphabetical order.

We were interested in finding out the relative importance of these values to the LSU student population. This scale was administered to 298 undergraduate students here recently. These students were asked to place a one next to the value which they thought most important to them, a two next to the value which they thought second most important, etc. The value which they thought least important was ranked 18th. Please examine the list carefully.

(Value list without ranks)

Now, would you please answer honestly the following question in a related area:

Are you sympathetic with the aims of supporters of the Equal Rights Amendment?

_____ Yes, and I have personally worked for the Amendment.

_____ Yes, but I have not personally worked for the
Amendment.

_____ No.

The 298 students in the study described above were asked this same question. The students' results were divided into three groups, according to how they responded. The table below shows the average ranking of the values Freedom and Equality for each of these three groups:

AVERAGE RANKINGS OF FREEDOM & EQUALITY

BY LSU STUDENTS

Yes, & have worked for the Amendment		Yes, but have not worked for the Amendment	No
Freedom	6	1	2
Equality	5	11	17

Notice in the table that:

- 1) Pro- and anti-ERA students all value freedom relatively highly. Of 18 values, all groups rank Freedom among the top six.
- 2) Students who are strongly for ERA value Equality rather highly--they ranked it five. But those against ERA place a much lower value on Equality--they ranked it 17. Those who

are non-participants but are sympathetic ranked
Equality 11.

Apparently, both freedom and equality are important to some people, while to others freedom is very important but equality is not. This raises the question whether those who are against ERA are really saying that they care a great deal about their own freedom but are indifferent to other people's freedom. Those who are for ERA are perhaps really saying they not only want freedom for themselves but for other people too. What do you think?

<hr/>										
1	2	3	4	5	6	7	8	9	10	11
I strongly agree							I strongly disagree			
with this interpretation.							with this interpretation.			

(Please check one)

This is the end of this phase of our experiment. We remind you that in order for your participation to be valid in this study, you must be here for the second phase which will be in two weeks. We thank you and hope this has been an interesting and instructive experience for you.

Appendix D

Posttest Instructions-All Groups

Today we would like to find out about your values. Your task is to arrange the values below in order of their importance to YOU, as guiding principles in YOUR life. Put a one next to the most important value, a two next to the second most important value, etc., down to the 18th and least important value. Please don't hesitate to erase or to change answers in any way. The end result should show how you truly feel (if you have already completed this survey, please complete it again. It is very important.).

(Value Survey)

This is the end of our study. The purpose and results of the study will be explained to you in class, after all the results have been analyzed, probably in a few weeks. Thank you for your participation.

Appendix E
Control Group Instructions
Phase I

This is a scientific study of value systems. There are no right or wrong answers in this study. The best answer is your own personal opinion.

Below is a list of 18 values in alphabetical order. This scale was administered to 298 undergraduate students here recently. These students were asked to place a one next to the value which they thought most important to them, a two next to the value they thought second most important, etc. The value which they thought least important was ranked 18th. Please examine the list carefully.

(Value list without ranks)

Now, would you please answer honestly the following question in a related area:

Are you sympathetic with the aims of supporters of the Equal Rights Amendment?

_____ Yes, and I have worked for the Amendment.

_____ Yes, but I have not worked for the Amendment.

_____ No.

Now we would like to find out about your values. Your task is to arrange the values below in order of their importance to YOU, as guiding principles in YOUR

life. Put a one next to the most important value, a two next to the second most important value, etc., down to the 18th and least important value. Please don't hesitate to erase or to change answers in any way. The end result should show how you truly feel.

(Value Survey)

This is the end of this phase of our experiment. We remind you that in order for your participation to be valid in this study, you must be here for the second phase which will be in two weeks. We thank you and hope this has been an interesting and instructive experience for you.

Vitae

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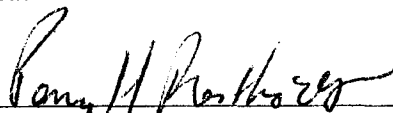
EXAMINATION AND THESIS REPORT

Candidate: Mark L. Paris

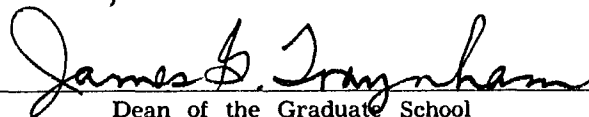
Major Field: Psychology

Title of Thesis: Group Influence and Cognitive Consistency as Determinants of
Value Change: A Methodological Analysis of Self-Confrontation
Theory

Approved:

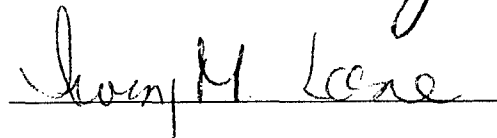
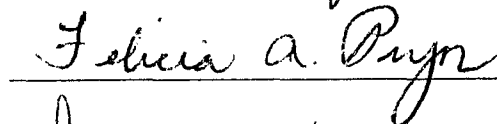
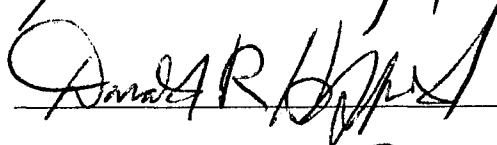
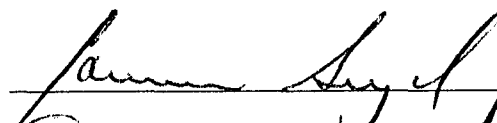


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Date of Examination:

April 25, 1980